

Functions Practice

Question 1a

Create a function that takes in 3 inputs and multiplies them all. Output the result.

Question 1b

Create a function that takes in any number of inputs and multiplies them all. Output the result.

Question 2a

Use `np.random.randint(100, size=100)` to create an array of 100 random integers.

Create a function that sums all the numbers in that array.

Do not use the `sum()` function.

Question 2b

Create a function that multiplies all the numbers (except 0) in that array.

Do not use the `np.prod()` function.

Question 2c

Create a function that multiplies all even numbers (except 0) in that array.

Do not use the `np.prod()` function.

Question 2d

Create a function that multiplies all numbers that are a multiple of 3 and 5 (except 0) in that array.

E.g. 15, 30, 45...

Do not use the `np.prod()` function.

Question 2e

Create a function that multiplies all numbers that are a multiple of 3 **or** 5 (except 0) in that array.

E.g. 3, 5, 6, 9, 10...

Do not use the `np.prod()` function.

Question 3

Each new term in the Fibonacci sequence is generated by adding the previous two terms. By starting with 1 and 2, the first 10 terms will be:

1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...

Create a function that takes in the nth term as the input and outputs the value of that term.

E.g. If your function is named Fibo()...

Fibo(1) should return 1

Fibo(2) should return 2

Fibo(3) should return 3

Fibo(4) should return 5

Fibo(5) should return 8

Solutions in the next lecture